

1 **WE CLAIM:**

- 2 1. A method for identifying a lost asset, the method comprising the steps of:
- 3 a) periodically transmitting a first predetermined identification signal
- 4 from a base station, the first predetermined identification signal unique
- 5 to the asset, each transmission of the first predetermined identification
- 6 signal separated by a first predetermined period of time;
- 7 b) receiving the first predetermined identification signal at an asset tag
- 8 attached to the asset, the asset tag having a predetermined
- 9 identification code unique to the asset;
- 10 c) comparing the first predetermined identification signal with the
- 11 predetermined identification code of the asset at the asset tag;
- 12 d) synchronizing the asset tag to the base station by transmitting a second
- 13 predetermined identification signal from the asset tag if the first
- 14 predetermined identification signal matches the predetermined
- 15 identification code of the asset, the second predetermined identification
- 16 signal containing the predetermined identification code of the asset;
- 17 e) generating a first alarm message at the asset tag indicating that the
- 18 asset is lost if the first predetermined identification signal does not
- 19 match the predetermined identification code of the asset or if the first
- 20 predetermined identification signal is not received after a first
- 21 predetermined period of time;
- 22 f) receiving the second predetermined identification signal at the base
- 23 station;

1 g) comparing the second predetermined identification signal with the first
2 predetermined identification signal at the base station; and
3 h) generating a base alarm message at the base station indicating that the
4 asset is lost if the predetermined identification code of the asset
5 contained in the second predetermined identification signal does not
6 match the first predetermined identification signal or if the second
7 predetermined identification signal is not received after a second
8 predetermined period of time.

9 2. The method as set forth in claim 1 further comprising the step of
10 generating a second alarm message at the asset tag after the first alarm message has
11 been generated, the second alarm message being generated when a playback button on
12 the asset tag is manually operated.

13 3. The method as set forth in claim 1 wherein the first alarm message is a
14 first prerecorded audible voice message stating that the asset is lost.

15 4. The method as set forth in claim 2 where the second alarm message is
16 a second prerecorded audible voice message containing further information regarding
17 the asset.

18 5. A system for identifying a lost asset, comprising:
19 a) means for transmitting a predetermined identification signal from a
20 base station, the first predetermined identification signal unique to the
21 asset;
22 b) means for receiving the first predetermined identification signal at a
23 asset tag attached to the asset, the asset tag having a predetermined
24 identification code unique to the asset;

- 1 c) means for comparing the first predetermined identification signal with
2 the predetermined identification code of the asset;
- 3 d) means for synchronizing the asset tag to the base station by
4 transmitting a second predetermined identification signal from the
5 asset tag if the first predetermined identification signal matches the
6 predetermined identification code of the asset, the second
7 predetermined identification signal containing the predetermined
8 identification code of the asset;
- 9 e) means for generating a first alarm message at the asset tag indicating
10 that the asset is lost if the first predetermined identification signal does
11 not match the predetermined identification code of the asset or if the
12 first predetermined identification signal is not received after a first
13 predetermined period of time;
- 14 f) means for receiving the second predetermined identification signal at
15 the base station;
- 16 g) means for comparing the second predetermined identification signal
17 with the first predetermined identification signal at the base station;
18 and
- 19 h) means for generating a base alarm message at the base station
20 indicating that the asset is lost if the predetermined identification code
21 of the asset contained in the second predetermined identification signal
22 does not match the first predetermined identification signal or if the
23 second predetermined identification signal is not received after a
24 second predetermined period of time.

1 6. The system as set forth in claim 5 wherein the means for transmitting
2 the first predetermined identification signal and the means for receiving the second
3 predetermined identification signal are combined into a first radio frequency
4 transceiver circuit operatively connected to a base station antenna, the first radio
5 transceiver and first antenna located at the base station.

6 7. The system as set forth in Claim 5 wherein the means for receiving the
7 first predetermined identification signal and the means for transmitting the second
8 predetermined identification signal are combined into a second radio frequency
9 transceiver circuit operatively connected to an asset tag antenna, the second radio
10 transceiver and asset tag antenna located at the asset tag.

11 8. The system as set forth in claim 5 wherein the means for comparing
12 the first predetermined identification signal with the predetermined identification code
13 of the asset and the means for synchronizing the asset tag to base station are combined
14 into a first logic controller operating a first software program, the first logic controller
15 located at the asset tag.

16 9. The system as set forth in claim 5 wherein the means for comparing
17 the second predetermined identification signal with the first predetermined
18 identification signal is a second logic controller operating a second software program,
19 the second logic controller located at the base station.

20 10. The system as set forth in claim 5 wherein the means for generating the
21 first alarm message comprises further means for manually generating a second alarm
22 message at the asset tag containing further information regarding the asset after the
23 first alarm message has been generated.

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- 1 11. The system as set forth in claim 10 wherein the means for generating
2 the first and second alarm messages comprise:
- 3 a) a first voice-recording circuit for recording the first and second alarm
4 messages;
- 5 b) a first message storage memory system for storing the first and second
6 alarm messages;
- 7 c) a first message playback circuit for playing the first and second alarm
8 messages from the first message storage memory system;
- 9 d) a second alarm message control circuit for activating the first message
10 playback circuit to play the second alarm message when the second
11 alarm message control circuit is manually activated; and
- 12 e) an audio speaker operatively connected to the first message playback
13 circuit for audibly reproducing the first and second alarm messages.
- 14 12. The system as set forth in claim 5 wherein the means for generating a
15 base alarm message comprises an integrated circuit operatively connected to an audio
16 amplifier operatively connected to an audio speaker, the electronic circuit adapted to
17 produce an audible signal as the base alarm message.
- 18 13. The system as set forth in claim 5 wherein the means for generating the
19 base alarm message comprises:
- 20 a) a second voice-recording circuit for recording the base alarm message;
- 21 b) a second message storage memory system for storing the base alarm
22 message;
- 23 c) a second message playback circuit for playing the base alarm message
24 from the second message storage memory system; and

1 d) an audio speaker operatively connected to the second message
2 playback circuit for audibly reproducing the base alarm message.

3 14. A system for identifying a lost asset, comprising:

4 a) a base station having

5 i) means for assigning a predetermined identification code unique to
6 the asset,

7 ii) a first wireless radio frequency signal transceiver operatively
8 connected to a base station antenna,

9 iii) a first microprocessor operating a first software program
10 operatively connected to the first wireless radio frequency signal
11 transceiver and the means for assigning the predetermined
12 identification code unique to the asset,

13 iv) a base alarm message playback mechanism operatively connected
14 to the first microprocessor,

15 v) a power supply operatively connected to the first transceiver, the
16 first microprocessor and the base alarm message playback
17 mechanism, and

18 vi) a suitable enclosure for housing the elements of the base station
19 listed above

20 whereby the base station is capable of transmitting a first
21 predetermined identification signal unique to the asset, receiving a
22 second predetermined identification signal containing a predetermined
23 identification code of an asset, comparing the first predetermined
24 identification signal with the predetermined identification code

1 contained in the second predetermined identification signal and
2 generating a base alarm message if said predetermined identification
3 code does not match the first predetermined identification signal or if
4 the second predetermined identification signal is not received within a
5 first predetermined period of time; and
6 b) an asset tag having
7 i) means for assigning a predetermined identification code unique to
8 the asset tag,
9 ii) a second wireless radio frequency signal transceiver operatively
10 connected to an asset tag antenna,
11 iii) a second microprocessor operating a second software program
12 operatively connected to the second wireless radio frequency signal
13 transceiver and the means for assigning the predetermined
14 identification code of the asset tag,
15 iv) an asset tag alarm message recording and playback mechanism
16 operatively connected to the second microprocessor, the alarm
17 recording and playback mechanism adapted to record and playback
18 a first alarm message,
19 v) a power supply operatively connected to the second transceiver, the
20 second microprocessor and the alarm message recording and
21 playback mechanism, and
22 vi) a suitable enclosure for housing the elements of the asset tag listed
23 above and attaching to an asset

1 whereby the asset tag is capable of receiving the first predetermined
2 identification signal, comparing the first predetermined identification
3 signal with the predetermined identification code of the asset tag,
4 synchronizing with the base station by transmitting the second
5 predetermined identification signal containing the predetermined
6 identification code of the asset tag if the first predetermined
7 identification signal matches the predetermined identification code of
8 the asset tag and generating the first alarm message if the first
9 predetermined identification signal does not match the predetermined
10 identification code of the asset tag or if the first predetermined
11 identification signal is not received within a second predetermined
12 period of time.

13 15. The system as set forth in claim 14 wherein the means for assigning a
14 predetermined identification code is programmed into the software program or is
15 manually set through user-selectable devices.

16 16. The system as set forth in claim 14 wherein the first and second
17 wireless radio frequency transceivers are adapted to communicate over a terrestrial
18 radio link or over a satellite radio link.

19 17. The system as set forth in claim 14 wherein the base alarm message
20 playback mechanism is an integrated circuit operatively connected to an audio
21 amplifier operatively connected to an audio speaker.

22 18. The system as set forth in claim 14 wherein the base station power
23 supply includes at least one direct current battery or an AC/DC power adapter.

1 19. The system as set forth in claim 14 wherein the asset tag alarm
2 message recording and playback mechanism is an integrated circuit operatively
3 connected to a memory storage system, the integrated circuit operatively connected to
4 an audio amplifier operatively connected to an audio speaker.

5 20. The system as set forth in claim 19 wherein the asset tag alarm
6 message recording and playback mechanism is operatively connected to a second
7 alarm message control circuit, the asset tag alarm message recording and playback
8 mechanism adapted to record a second alarm message, the asset tag alarm message
9 recording and playback adapted to playback the second alarm message after the first
10 alarm message has been generated and after the second message control circuit has
11 been manually activated.

12 21. The system as set forth in claim 14 wherein the asset tag power supply
13 includes at least one direct current battery.